



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Sandeep Gulati  
Serial No. : 10/616,869  
Filed : July 9, 2003  
Title : ACTIVE INTERFEROMETRIC SIGNAL ANALYSIS IN SOFTWARE

Art Unit : 2857  
Examiner : Felix E. Suarez

**MAIL STOP AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants request consideration of the references listed on the attached PTO-1449 form (7 pages). Under 37 C.F.R. § 1.98 (a)(2)(ii), only copies of foreign patent documents and/or non-patent literature are enclosed. Copies of any listed U.S. patents or U.S. patent application publications can be provided upon request.

This statement is being filed within three months of the filing date of the application or before the receipt of a first Office Action on the merits. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Carl A. Kukkonen, III  
Reg. No. 42,773

Date: January 9, 2006

Fish & Richardson P.C.  
12390 El Camino Real  
San Diego, California 92130  
Telephone: (858) 678-5070  
Facsimile: (858) 678-5099

10585514.doc

**CERTIFICATE OF MAILING BY FIRST CLASS MAIL**

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

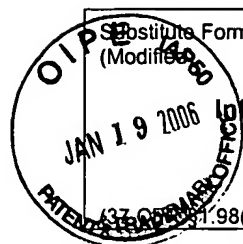
January 9, 2006

Date of Deposit

Signature

Kelly M. Smith

Typed or Printed Name of Person Signing Certificate


 Substitute Form PTO-1449  
 (Modified)

 U.S. Department of Commerce  
 Patent and Trademark Office

 Attorney's Docket No.  
 18329-008001

 Application No.  
 10/616,869

**Information Disclosure Statement  
 by Applicant**

(Use several sheets if necessary)

 Applicant  
 Sandeep Gulati

 Filing Date  
 July 9, 2003

 Group Art Unit  
 2857

**U.S. Patent Documents**

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	3786341	01/15/74	Anderson et al.			
	AB	4665440	05/12/87	Tromberg			
	AC	4686695	08/11/87	Macovski, Albert			
	AD	5134528	07/28/92	Sato			
	AE	5168499	12/01/92	Peterson et al.			
	AF	5236826	08/17/93	Marshall			
	AG	5389512	02/14/95	Sninsky et al.			
	AH	5442593	08/15/95	Woodbury et al.			
	AI	5445934	08/29/95	Fodor et al.			
	AJ	5462879	10/31/95	Bentsen			
	AK	5492840	02/20/96	Malmqvist et al.			
	AL	5552270	09/03/96	Khrapko et al.			
	AM	5561071	10/01/96	Hollenberg et al.			
	AN	5576176	11/19/96	Adams et al.			
	AO	5605662	02/25/97	Heller et al.			
	AP	5631134	05/20/97	Cantor			
	AQ	5631734	05/20/97	Stern et al.			
	AR	5632041	05/20/97	Peterson et al.			
	AS	5679510	10/21/97	Ray et al.			
	AT	5683881	11/04/97	Skiena			
	AU	5688648	11/18/97	Mathies et al.			
	AV	5700637	12/23/97	Southern			
	AW	5733729	03/01/98	Lipshutz			
	AX	5741644	04/21/98	Kambara et al.			
	AY	5763175	06/09/98	Brenner			
	AZ	5817462	10/06/98	Garini et al.			
	BA	5825936	10/20/98	Clarke et al.			

Examiner Signature

Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 18329-008001	Application No. 10/616,869
	Applicant Sandeep Gulati		
	Filing Date July 9, 2003	Group Art Unit 2857	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	BB	5848996	12/15/98	Eldor			
	BC	5858659	01/12/99	Sapolsky			
	BD	5858732	01/12/99	Solomon et al.			
	BE	5863764	01/26/99	Hillman et al.			
	BF	5874214	02/23/99	Nova et al.			
	BG	5885578	03/23/99	Salk et al.			
	BH	5925525	07/20/99	Fodor			
	BI	5968740	10/1999	Fodor			
	BJ	5974164	10/26/99	Chee			
	BK	6025601	02/15/00	Trulson			
	BL	6066454	05/23/00	Lipshutz et al.			
	BM	6090555	07/18/00	Fiekowsky et al.			
	BN	6171793	01/09/01	Phillips			
	BO	6185561	02/06/01	Balaban et al.			
	BP	6218122	04/17/01	Friend et al.			
	BQ	6223127	04/24/01	Berno			
	BR	6225625	05/01/01	Pirrung et al.			
	BS	6228593	05/08/01	Lipschutz et al.			
	BT	6229911	05/08/01	Balaban			
	BU	6242180	06/05/01	Chee			
	BV	6245511	06/12/01	Gulati			
	BW	6294327	09/25/01	Walton et al.			
	BX	6308170	10/23/01	Balaban			
	BY	6342355	01/29/02	Hacia			
	BZ	6344316	02/05/02	Lockhart			
	CA	6361937	03/26/02	Stryer			
	CB	6368799	04/09/02	Chee			

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 18329-008001	Application No. 10/616,869
	Applicant Sandeep Gulati		
	Filing Date July 9, 2003	Group Art Unit 2857	

### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	CC	6370478	04/09/02	Stoughton			
	CD	6391550	05/21/02	Lockhart			
	CE	6420108	07/16/02	Mack			
	CF	6453241	09/17/02	Bassett			
	CG	6468744	10/22/02	Cronin			
	CH	6490533	12/03/02	Weiner			
	CI	6671625	12/30/03	Gulati, Sandeep			
	CJ	6704662	03/09/04	Gulati			
	CK	6780589	08/24/04	Gulati			
	CL	6963806	11/08/05	Gulati			
	CM	2003/0044775	03/06/03	Gulati			
	CN	2003/0215867	11/20/03	Gulati			
	CO	2004/0064261	04/01/04	Gulati			
	CP	2004/0111219	06/10/04	Gulati			

### Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	CQ	0077149	01/02/86	EP				
	CR	0426564	12/28/94	EP				
	CS	0437829	10/05/94	EP				
	CT	0802426	11/14/01	EP				
	CU	0854197	07/22/98	EP				
	CV	1026260	08/09/00	EP				
	CW	1145177	10/20/04	EP				
	CX	1145181	10/20/04	EP				
	CY	1157347	10/20/04	EP				
	CZ	1406201	04/07/04	EP				

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 18329-008001	Application No. 10/616,869
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Sandeep Gulati	
		Filing Date July 9, 2003	Group Art Unit 2857

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	DA	00/05408	02/03/00	PCT				
	DB	00/12759	03/09/00	PCT				
	DC	00/28091	05/18/00	PCT				
	DD	00/39339	07/06/00	PCT				
	DE	00/51055	08/31/00	PCT				
	DF	00/51056	08/31/00	PCT				
	DG	00/52625	09/08/00	PCT				
	DH	2004/102456	11/25/04	PCT				
	DI	93/13711	07/22/93	PCT				
	DJ	93/21339	10/28/93	PCT				
	DK	97/02488	01/23/97	PCT				
	DL	98/07888	02/26/98	PCT				
	DM	98/37417	08/27/98	PCT				
	DN	98/48048	10/29/98	PCT				
	DO	99/31275	06/24/99	PCT				
	DP	99/39008	08/08/99	PCT				
	DQ	99/44063	09/02/99	PCT				
	DR	99/45148	09/10/99	PCT				
	DS	99/66024	12/23/99	PCT				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	DT	Alacid et al., "Bound and resonance states by a time-independent filter diagonalization method for large Hamiltonian systems," Chemical Physics Letters 305: 258-262 (1999)
	DU	Ando, B. and S. Graziani, <i>Stochastic Resonance: Theory and Applications</i> , Boston: Kluwer Academic Publishers, pp. 11-91 (2000)
	DV	Baez et al., "Irving Ezra Segal (1918-1998)," Notices of the American Mathematical Society 46(6): 659-668 (June/July 1999)
	DW	Brockman, J., "Whole-Loan Traders Find Marketplace on Web Site," American Banker 163(36): 10 (February 24, 1998)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 18329-008001	Application No. 10/616,869
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Sandeep Gulati	
		Filing Date July 9, 2003	Group Art Unit 2857

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	DX	Brody et al., "Geometry of Quantum Statistical Interference," Physical Review Letters 77(14): 2851-2855 (Sep. 30, 1999)
	DY	Brown, P.O. and D. Botstein, "Exploring the New World of the Genome with DNA Microarrays," Nature Genetics 21 (Suppl.): 33-37 (Jan., 1999)
	DZ	Caldiera, A.O. and A.J. Leggett, "Quantum Tunnelling in a Dissipative System," Annals of Physics, 149: 374-456 (1983)
	EA	Chandre et al., "Kolmogorov-Arnold-Moser renormalization-group approach to the breakup of invariant tori in Hamiltonian systems," Physical Review E 57(2): 1536-1543 (Feb., 1998)
	EB	Daido, "Multibranch Entrainment and Scaling in Large Populations of Coupled Oscillators", Phys. Rev. Lett. 77: 1406-1409 (1996)
	EC	Dailey P.J. and D. Hayden, "Viral load assays: methodologies, variables, and interpretation," Chapter 13 in: Cohen PT, Sande MA, Volberding PA, eds. <i>The AIDS knowledge base: a textbook on HIV disease from the University of California, San Francisco, and San Francisco General Hospital</i> . 3d ed. San Francisco: HIV InSite, 1998 & also available at the: <i>The AIDS Knowledge Base [online]</i> (April, 1998), <a href="http://hivinsite.ucsf.edu/skb/current/02qrna/index.html">http://hivinsite.ucsf.edu/skb/current/02qrna/index.html</a> & [retrieved on 10/05/00]
	ED	Darling et al., "Adiabatic Analysis of Quantum Dynamics", Physical Review Letters, 78(9): 1731-1734 (March 3, 1997)
	EE	Finkelstein, B., "Secondary market participants seek to do business on website," Origination News; 7(9): 100 (June, 1998)
	EF	Freeman, M., "Automated MBS Trading – A First at First Boson," Wall Street & Technology 11(13): 10 (May 1994)
	EG	Gammaitoni et al., "Extraction of Periodic Signals from a Noise Background", Physics Letters A, 142(2-3): 59-62 (Dec. 4, 1989)
	EH	Gammaitoni et al., "Stochastic Resonance", Review of Modern Physics, 70(1): 223-287 (Jan., 1998)
	EI	Gardner, William, A. (Ed.), <i>Cyclostationarity in Communications and Signal Processing</i> , New York: IEEE Press, pp. 46-47 (1994)
	EJ	GeneChip produced by Affymetrix, <a href="http://www.affymetrix.com/products/arrays/index.affx">http://www.affymetrix.com/products/arrays/index.affx</a> , 1 page, (accessed on 12/12/05)
	EK	Gonima, L., "Simple algorithm for the atmospheric correction of reflectance images," International Journal of Remote Sensing 14(6): 1179-1187 (1993)
	EL	Goychuk, I. and P. Hänggi, "Quantum Stochastic Resonance in Parallel", New Journal of Physics, 1: 14.1-14.14 (Aug. 27, 1999)
	EM	Grifoni et al., "Dissipation, Decoherence and Preparation Effects in the Spin-Boson System," The European. Phys. J. B 10: 719-729 (Feb., 1999)
	EN	Ter Haar, D., "The Canonical Equations of Motion," Chapter 5 in <i>Elements of Hamiltonian Mechanics</i> , Amsterdam: North-Holland Publishing Company, pp. 95-103 (1961)
	EO	Harris, F. and D.S. King, "Adaptive filters using fractal dimension of data," Proceedings of the Asilomar Conference on Signals, Systems, and Computers, New York: IEEE, 24: 278-282 (November 5, 1990)
	EP	Heller et al., "Discovery and analysis of inflammatory disease-related genes using cDNA microarrays," Proceedings of the National Academy of Sciences (USA), 94: 2150-2155 (March, 1997)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 18329-008001	Application No. 10/616,869
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Sandeep Gulati	
		Filing Date July 9, 2003	Group Art Unit 2857

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	EQ	Imafuku et al., "Quantum Stochastic Resonance in Driven Spin-Boson System with Stochastic Limit Approximation," arXiv:quant-ph/9910025 1: 1-9 (October 6, 1999)
	ER	Jordan et al., "The Variational Formulation of the Fokker-Planck Equation," Siam. J. Math. Anal., 29(1): 1-17 (Jan. 1998)
	ES	Keegan, J., "Big Pension Funds Like Calpers Get Comfy with Private Equity," Investment Dealers' Digest-IDD pp. 13 (August 24, 1998)
	ET	Kilin et al., "Complex Quantum Structure of Nonclassical Superposition States and Quantum Instability in Resonance Fluorescence," Physical Review Letters 76(7): 1051-1054 (1996)
	EU	Knight, A., "Whole loans on the Net," Wall Street & Technology 16(1):74 (Jan. 1998)
	EV	Leggett et al., "Dynamics of the Dissipative Two-State System," Reviews of Modern Physics 59(1): 1-85 (Jan. 1987)
	EW	Lemm et al., "A Bayesian Approach to Inverse Quantum Statistics", Physics Review Letters, 84(10): 2068-2071, (March 6, 2000)
	EX	Lew, R.R. and C.L. Schauf, "Fractal Filtering of Channel Data," Biochim Biophys ACTA 1023(2): 305-311 (1990)
	EY	Li, C. and W.H. Wong et al., "Model-Based Analysis of Oligonucleotide Arrays: Expression Index Computation and Outlier Detection," Proc. Natl. Acad. Sci. USA 98(1): 31-36 (Jan. 2, 2001)
	EZ	Lin et al., "A porous silicon-based optical interferometric biosensor," Science 278: 840-843 (1997)
	FA	Lindner et al., "Array enhanced stochastic resonance and spatiotemporal synchronization," Physical Review Letters 75(1): 3-6 (July 3, 1995)
	FB	Löcher et al., "Spatiotemporal Stochastic Resonance in a System of Coupled Diode Resonators", Physical Review Letters, 77(23): 4698-4701 (Dec. 2, 1996)
	FC	Lofstedt, R. and S.N. Coppersmith, "Quantum Stochastic Resonance," Phys Rev. Letters, 72(13): 1947-1950 (1994)
	FD	Makarov, D.E. and N. Makri, "Stochastic resonance and nonlinear response in double-quantum-well structures," Physical Review B 52(4): R2257-R2260 (Jul 15, 1995)
	FE	Maybeck, P.S., "Introduction," Chapter 1 in <i>Stochastic Models, Estimation, and Control</i> , Volume 1, New York: Academic Press, pp. 1-16 (1979)
	FF	McNamara, B. and K. Wisenfeld, "Theory of Stochastic Resonance," Phys Rev. A 39: 4854-4869 (May 1, 1989)
	FG	Merigan, T., "Individualization of therapy using viral markers," Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology 10(Suppl 1): S41-S46 (1995)
	FH	Mitaim et al., "Adaptive Stochastic Resonance," Proceedings of the IEEE 86(11): 2152-2183 (November, 1998)
	FI	Nishiyama, "Numerical Analysis of the Dissipative Two-State System with the Density-Matrix Hilbert-space-reduction Algorithm," The European Physical Journal B, 12:547-554, (1999)
	FJ	Pathria, R.K., "The Theory of Simple Gases," Chapter 6 in <i>Statistical Mechanics</i> , Toronto: Pergamon Press, pp. 136-147 (1972)
	FK	Setala, J., "The Future of Ag Lending Part III: Ag Lender Perspectives," Agri Finance 2(4): 1, 6-9 (April, 1998)
	FL	Simonotto et al., "Visual Perception of Stochastic Resonance", Phys Rev. Lett. 78: 1186-1189 (Feb. 10, 1997)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 18329-008001	Application No. 10/616,869
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Sandeep Gulati	
		Filing Date July 9, 2003	Group Art Unit 2857

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	FM	Sinnock, B., "MBS Trade Slows As Benchmark Bond Yields Spread Prepays Fears," National Mortgage News 22(13): 6 (December 1997)
	FN	Somaroo et al., "Expressing the Operations of Quantum Computing in Multiparticle Geometric Algebra", Phys. Lett. A 240: 1-7 (March 23, 1998)
	FO	Stinchcombe, R.B. and G.M. Schütz, "Application of Operator Algebras to Stochastic Dynamics and the Heisenberg Chain", Physical Review Letters, 75(1): 140-143 (Jul. 3, 1995)
	FP	Tsaur, G. and J. Wang, "Energy diffusion due to non-linear perturbation on linear Hamiltonians," Physical Review E. 54(5): 4657-4666 (1996)
	FQ	Van Leeuwen, R., "Causality and Symmetry in Time-Dependent Density-Functional Theory", Physical Review Letters, 80(6): 1280-1283 (Feb. 9, 1998)
	FR	Vitali, D. and R. Mannella, "Quantum Stochastic Resonance in the Dissipative Two-State Systems," Il Nuovo Cimento della società italianian di fisica 17D(7-8):959-967 (July, 1995)
	FS	Wells, D.A., "Hamilton's Equations of Motion," Chapter 16 in <i>Theory and Problems of Lagrangian Dynamics with a treatment of Euler's Equations of Motion, Hamilton's Equations and Hamilton's Principles</i> , Schaum's Outline Series, New York: McGraw-Hill Company, pp.316-321 (1967)
	FT	Wornell et al., "Estimation of Fractal Signals from Noisy Measurements Using Wavelets," IEEE Transactions on Signal Processing 40(3): 611-623 (March, 1992)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	